

REMARKS / ARGUMENTS

Applicants thank the Examiner for the careful review of this application.

Claims 1-7, 15, 17-23 and 29-33 are pending in this application. Claims 1-7, 15, 17-23 and 29-33 have been rejected by the Examiner. Applicants have amended several claims to correct technical issues related to the claims.

Claim Rejections – 35 USC §102

Claims 1-7, 17-23 and 29-33 are rejected under 35 U.S.C 102(b) as being anticipated by Hilchey et al. (EP 0,675,520). Applicants submit that Hilchey fails to disclose the claimed invention, and thus cannot anticipate or render obvious the claims of the present application. Referring to claim 1, Applicants claim:

1. A cathode, said cathode formed by a cylindrical hollow part closed at a first end and open at a second end, wherein an outer and inner surface portion of said cylindrical hollow part includes a layer of getter material.

As the claim makes clear, both the outer and inner surfaces of the cylindrical hollow part include layers of getter material. However, Hilchey takes a different and contradictory approach. Hilchey states “The emitter coating 40 is applied to form of a thin layer coating over nearly all the exposed surfaces inside the full cavity 36 and the narrow cavity 38.” See Hilchey, p. 9. Thus, Hilchey teaches that the emitter coating 40 (a getter) is found on the inside of the cylindrical hollow part. However, Hilchey goes on to state “The manufacture of the miniature electrode 10 requires care that emitter coating 40 is not deposited on the exterior of the can 20, as electron emission sites on the exterior of the can 20 tend to draw the arc discharge

of such an outside location, resulting in uneven local heating adjacent the envelope wall." See Hilchey, p. 9 (emphasis added). Therefore, Hilchey not only does not teach the claimed invention, but actively teaches away from claiming that getter is deposited on both the inner and outer surfaces. For at least this reason, the rejection of claim 1 over Hilchey should be withdrawn.

Similarly, with respect to claim 17, Applicants claim:

17. A cathode, said cathode formed by a cylindrical hollow part closed at a first end and open at a second end, wherein on an outer or inner portion of the surface of said cylindrical hollow part is present a layer of getter material, and wherein a portion of said surface near said first end of said cathode is free of said layer of getter material.

Thus, Applicants claim the getter material is not found at the first end of the cathode – the closed end. However, Hilchey explains that the part of the cylindrical hollow part which is free of getter is found at the second end (or open end of the cylindrical hollow part), which is antithetical to the claimed invention. For at least this reason, the rejection of claim 17 over Hilchey should be withdrawn.

Applicants also note that Hilchey provides for needle spin coating of getter. However, this technique will not produce the claimed invention of claim 17, inasmuch as needle spin coating as described is incapable of leaving the first end of the claimed invention with getter as claimed, and leaving the second end of the claimed invention as a surface on which the getter material is not present. Rather, needle spin coating tends to result in a similar device as that described in Hilchey, with the first end having getter present and the second end free of getter.

Dependent Claims

Claims 2-7, 18-23 and 29-33 each depend from an allowable base claim, and are thus allowable. Additionally, other aspects of the dependent claims may provide additional distinctions from the prior art. For example, the needle spin coating of Hilchey is different from the coatings (and techniques for achieving those coatings) of claims 6 and 7. Thus, Applicants request reconsideration of the dependent claims and allowance thereof, and Applicants likewise submit that the process does lead to different materials from the prior art.

Claim Rejections – 35 USC §103

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hilchey et al. (EP 0,675,520) in view of Almer (US 3,582,702). Applicants have explained the deficiencies of Hilchey in reference to the claims in the remarks above. These deficiencies are at least as important in the context of an obviousness rejection as the deficiencies are in the context of the anticipation rejection discussed above. Moreover, Applicants have previously addressed the fact that Almer teaches away (see Applicants' paper of October, 2004) from the claimed invention. As such, the combination of Hilchey with Almer is inappropriate, and for at least the reasons referenced above and in 2004, elements of the claims are not taught by Hilchey and Almer, separately or collectively. Accordingly, Applicants submit that the rejection of claim 15 should be reversed as incorrect.

CONCLUSION

Applicants submit that all claims pending in the present application are now allowable, and request such allowance in light of reconsideration of the application. If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 293-3352.

Applicants hereby authorize any necessary charges for any deficiency in fees or and credit for any overages to Deposit Account No. 50-3539. To the extent necessary, Applicants request an extension of time for reply to the Office Action, and authorized charging of Deposit Account No. 50-3539 for this purpose.

Respectfully Submitted,
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